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10/776,620	02/12/2004	Donald J. Curry	117748	3947
27074 7590 05/04/2007 OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER PATEL, JAYESH A	
			ART UNIT 2624	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/776,620	Applicant(s) CURRY ET AL.	
	Examiner Jayesh A. Patel	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 11-15 and 18-26 is/are rejected.
- 7) ☒ Claim(s) 4, 10, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 14-17 are objected to because of the following informalities: The claims are directed to apparatus claims, but the steps recite the methods. For example Claim 14 recites an apparatus of claim 13 further comprising (a, b.c.d--) which are the steps. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs, which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (Claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim(s) **[23-26]** is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim **[23-26]** defines a **[a computer program and a computer readable medium]** embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed **[a computer program and a computer readable medium]** can range from paper on which the program is written, to a program simply contemplated and memorized by a person.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5-9,11-12,23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Berkner et al. (US 20040146199 A1) hereafter Berkner.

1. Regarding Claim 1, Berkner discloses a method for generating a thumbnail image in **(Figs 1 and 2)**, comprising: discarding data of a portion of lines of an original image of an original document on **(Page 5 Para 0071)**; and combining data not discarded to generate the thumbnail image corresponding to the original image on **(Page 5 Para 0072)**.

2. Regarding Claim 2, Berkner discloses the method of claim 1, further comprising: identifying the portion of lines to be discarded based on a y_position value and a y_increment value at **(Page 4 Para 0064 and 0065)**; selecting pixels in lines not discarded that are within a neighborhood from a current x_position value and an x_size value at **(Page 5 Para 0068,0069,0070,0071)**; and combining values of selected pixels to generate a value of a current pixel of the thumbnail image at **(Page 5 Para 0072)**. Berkner discloses a canvas (rectangle) that is used for selection of the image that is to be discarded and the remaining portion is displayed. Berkner discloses the importance of the text zone is determined based on the position in the page.

3. Regarding Claim 3, Berkner discloses the method of claim 2, further comprising: including one or more pixels in a first neighborhood that are within a

boundary corresponding to the current $x_position$ value and a position corresponding to a sum of the current $x_position$ value and the x_size value; generating a next current $x_position$ value for a next pixel of the thumbnail image by: 1) adding the $x_increment$ value to the current $x_position$ value corresponding to the current pixel of the thumbnail image, or 2) adding the $y_increment$ value to a current $y_position$ value corresponding to the current pixel of the thumbnail image and setting the next current $x_position$ value to an x_start value if a sum of the $x_increment$ value and the current $x_position$ value exceeds a $line_width$ value, or when an x_count value of reduced size pixels exceeds an x_count_limit value, the x_count value being a pixel number in a current line of the reduced size image; and including pixels in a next neighborhood that are within a next boundary corresponding to the next current $x_position$ value for the next pixel of the thumbnail image and the next current $x_position$ value corresponding to a sum of the current $x_position$ value and the x_size value at **(Page 5 Para 0070,0071 and 0072)**. Berkner discloses the crop locations **(e.g. coordinates, height and width)**, the paste locations **(x and y coordinates)**, dimensions, scaling **(e.g. floating point and rational number)** which indicates the starting positions along the x and y direction and how far the selection goes in each direction i.e. the crop size, length, width and height are selected.

4. Regarding Claim 5, Berkner discloses the method of claim 3, further

comprising: setting the boundary to include pixels of the original image that has a position that is at most half a distance between adjacent pixels from the current x_position value, and to include pixels of the original image that has a position that is less than half the distance between adjacent pixels from a position of the current x_position value plus an x_size value at **(Page 5 Para 0070,0071 and 0072)**. Berkner discloses the crop locations **(e.g. coordinates, height and width)**, the paste locations **(x and y coordinates)**, dimensions, scaling **(e.g. floating point and rational number)** which indicates the starting positions along the x and y direction and how far the selection goes in each direction i.e. the crop size, length, width and height are selected.

5. Regarding Claim 6, Berkner discloses the method of claim 2, further comprising: setting a number of selected pixels to be a power of two; summing into a sum the selected pixels; and binary shifting the sum by an exponent of the power of two to generate the current pixel of the thumbnail image on **(Page 5 Para 0070,0071,0072,0073,0074)**. Berkner discloses the selection **(cropping)** done by the processor in **(Page 9 Para 0161)** and computing. The processing logic is able to process in floating point binary value as disclosed in Para 0070.

6. Regarding Claim 7, Berkner discloses a method for generating a reduced size image in **(Figs 1 and 2)**, comprising: discarding all data spanned by a portion of one or more first dimensions of a plurality of dimensions that span an original

image of an original document at **(Page 4 Para 0064 and 0065)**; and combining data not discarded to generate a reduced size image corresponding to the original image at **(Page 5 Para 0070,0071 and 0072)**.

7. Regarding Claim 8, Berkner discloses the method of claim 7, further comprising: identifying the portion of the first dimensions based on one or more first position values and one or more first increment values, one first position value and one first increment value corresponding to each of the first dimensions **(Page 4 Para 0064 and 0065)**; identifying the data not discarded based on the first position values, the first increment values, second position values and second increment values, each pair of the second position and increment values corresponding to one of second dimensions which are the plurality of dimensions other than the first dimensions **(Page 5 Para 0068,0069,0070,0071)**; selecting data points of the data not discarded that are within a neighborhood from a current position value corresponding to the first and second position values; and combining selected data points to generate a current data point of the reduced size image **(Page 5 Para 0072)**. Berkner discloses a canvas (rectangle) that is used for selection of the image that is to be discarded and the remaining portion is displayed. Berkner discloses the importance of the text zone is determined based on the position in the page.

8. Regarding Claim 9, Berkner discloses the method of claim 8, further comprising: including one or more data points in a first neighborhood that are within a boundary corresponding to the current position value and a position value corresponding to a sum of the current position values and corresponding size values, one size value corresponding to each of the second dimensions; generating next current position values for a next data point of the reduced size image by: 1) adding the second increment values to the current position values corresponding to the current data point of the reduced size image in the second dimensions, or 2) adding the first increment values to the current position values corresponding to the current data point of the reduced size image in the first dimensions and setting the next current position values in the second dimensions to start values corresponding to the second dimensions if a sum of the second increment values and the current position values exceeds width values corresponding to any of the second dimensions, or when a count value in one of the second dimensions of reduced size pixels exceeds a corresponding count_limit value, the count value being a next data point position in a current line of the reduced size image; and including data points in a next neighborhood that are within a next boundary corresponding to the next current position and a position value corresponding to a sum of the current position values and the corresponding size values at **(Page 5 Para 0070,0071 and 0072)**. Berkner discloses the crop locations **(e.g. coordinates, height and width)**, the paste locations **(x and y coordinates)**, dimensions, scaling **(e.g. floating point and**

rational number) which indicates the starting positions along the x and y direction and how far the selection goes in each direction i.e. the crop size, length, width and height are selected.

9. Regarding Claim 11, Berkner discloses the method of claim 9, further comprising: setting the boundary to include data points of the original image that has a position value that is at most half a distance between adjacent data points from the current position value in any of the second dimensions, and to include data points of the original image that has a position value that is less than half the distance between adjacent data points from a position value set by any one of the current position values plus a corresponding size value in any of the second dimensions on **(Page 4 Para 0064 and 0065)**.

10. Regarding Claim 12, Berkner discloses the method of claim 8, further comprising: setting a number of selected data points to be a power of two; summing into a sum the selected data points; and binary shifting the sum by an exponent of the power of two to generate the current data point of the reduced size image on **(Page 5 Para 0070,0071,0072,0073,0074)**. Berkner discloses the selection **(cropping)** done by the processor in **(Page 9 Para 0161)** and computing. The processing logic is able to process in floating point binary value as disclosed in Para 0070.

11. Claim 23 is a software program that performs a corresponding method of Claim 1. Therefore see the explanation of Claim 1. Berkner also discloses a program on (Page 3 Para 0037).

12. Claim 24 is a software program that performs a corresponding method of Claim 2. Therefore see the explanation of Claim 2. Berkner also discloses a program on (Page 3 Para 0037).

13. Claim 25 is a software program that performs a corresponding method of Claim 3. Therefore see the explanation of Claim 3. Berkner also discloses a program on (Page 3 Para 0037).

14. Regarding Claim 26, Berkner discloses a computer-readable medium, comprising the software program of claim 23 on (Page 3 Para 0037).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-15,18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkner in view of Siegel et al. (US 20050063615 A1) hereafter Siegel.

15. Regarding Claim 13, Berkner discloses an apparatus on **(Page 2 Para0013)**. Berkner also disclose the apparatus creating a constrained display in Para 0037 and 0071. Berkner also discloses performing a connected component analysis to produce connected neighborhoods **(fill in details)** on **(Page 8 Para 0118,0119 and 0120)** however is silent about the apparatus comprising: an interpolator; a position controller coupled to the interpolator; one or more position values couple to the position controller, the position controller discarding all data in an original image of an original document spanned by a portion of first dimensions of a plurality of dimensions that span the original document by processing the position values to skip over discarded data, and the interpolator combining data not discarded to generate a reduced size image of the original image.

Siegel discloses an apparatus in **(Figs 1 and 2)** an interpolator; a position controller coupled to the interpolator; one or more position values couple to the position controller, the position controller discarding all data in an original image of an original document spanned by a portion of first dimensions of a plurality of dimensions that span the original document by processing the position values to skip over discarded data, and the interpolator combining data not discarded to generate a reduced size image of the original image on **(Page 1 Para 0009 and 0010 and Page 3 Para 0034)**. Siegel also discloses a system and a method of

suppressing one or more features before the image content is displayed in **(Para 0008)**. Siegel also discloses such a system is needed in which images of some or all of the text, pictures and other features surrounding the located search terms would be provided for immediate review by the user, consistent with the permissions granted for providing such content to the user in **(Para 0007)**. **(Restricted content would be suppressed)**. Both Berkner and Siegel are from the same field of endeavor and are analogous art; therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Siegel in the apparatus and method of Berkner for the above reasons.

16. The rejection of all the elements of Claim 14 has been discussed with respect to the method Claims 2 and claim 8. Berkner discloses an apparatus on **(Page 2 Para0013)**. Berkner also discloses the apparatus creating a constrained display in Para 0032 and 0071. Siegel discloses an apparatus in **(Figs 1 and 2)** an interpolator; a position controller coupled to the interpolator; one or more position values couple to the position controller, the position controller discarding all data in an original image of an original document spanned by a portion of first dimensions of a plurality of dimensions that span the original document by processing the position values to skip over discarded data, and the interpolator combining data not discarded to generate a reduced size image of the original image on **(Page 1 Para 0009 and 0010 and Page 3 Para 0034)**. Siegel also

discloses a system and a method of suppressing one or more features before the image content is displayed in **(Para 0008)**. Siegel also discloses such a system is needed in which images of some or all of the text, pictures and other features surrounding the located search terms would be provided for immediate review by the user, consistent with the permissions granted for providing such content to the user in **(Para 0007)**. **(Restricted content would be suppressed)**. Both Berkner and Siegel are from the same field of endeavor and are analogous art; therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Siegel in the apparatus and method of Berkner for the above reasons.

17. The rejection of all the elements of claim 15 has been discussed with respect to Claim 3. See the explanation of Claim 3 performed by the apparatus.

18. The rejection of all the elements of claim 18 has been discussed with respect to Claim 6. See the explanation of Claim 6 performed by the apparatus.

19. Regarding Claim 19 Berkner discloses an apparatus, comprising: position controlling means for identifying data points of an original image of an original document to be used to generate a reduced size image in **(Fig1 and Page 3 Para 0037 and 0038)**. Berkner also discloses performing a connected component analysis to produce connected neighborhoods **(fill in details)** on

(Page 8 Para 0118,0119 and 0120) however is silent about the apparatus and interpolation means for generating output data points of the reduced size image based on the data points identified by the position controlling means.

Siegel discloses interpolation means for generating output data points of the reduced size image based on the data points identified by the position controlling means on **(Page 1 Para 0009 and 0010 and Page 3 Para 0034)**.

Siegel also discloses a system and a method of suppressing one or more features before the image content is displayed in **(Para 0008)**. Siegel also discloses such a system is needed in which images of some or all of the text, pictures and other features surrounding the located search terms would be provided for immediate review by the user, consistent with the permissions granted for providing such content to the user in **(Para 0007). (Restricted content would be suppressed)**. Both Berkner and Siegel are from the same field of endeavor and are analogous art; therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of Siegel in the apparatus and method of Berkner for the above reasons.

20. Regarding claim 20, Berkner and Siegel discloses an apparatus of claim 13.

Berkner further discloses a xerographic marking device incorporating the apparatus of claim 13 on **(Page 2 Para 0032)**.

21. Regarding claim 21, Berkner and Siegel discloses an apparatus of claim 13. Berkner further discloses a marking device incorporating the apparatus of claim 13 on **(Page 2 Para 0032)**.

22. Regarding claim 22, Berkner and Siegel discloses an apparatus of claim 13. Berkner further discloses a digital photocopier incorporating the apparatus of claim 13 on **(Page 2 Para 0032)**.

Allowable Subject Matter

Claims 4,10,16 and 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

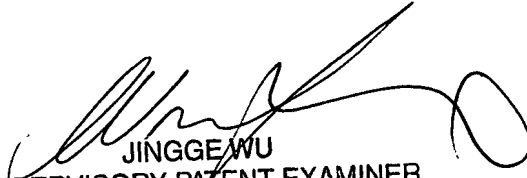
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayesh A. Patel whose telephone number is 571-270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jayesh Patel
04/26/07

JP


JINGGE WU
SUPERVISORY PATENT EXAMINER